



Fight The Bite

The First Line Of Defense

West Nile Virus

Insect Repellents: Deciding on Their Use

Chemical repellents are effective at reducing bites from insects that can transmit disease. But their use is not without risk of health effects, especially if repellents are applied in large amounts or improperly. This information will help you decide when and if a repellent is right for you.

ABOUT REPELLENTS

Two active ingredients found in repellents are DEET (*the label might say NN-diethyl-m-toluamide*) and permethrin. Most insect repellents contain one of these active ingredients. DEET comes in many different concentrations, with percentages as low as five percent or as high as 100 percent. In general, the higher the concentration, the higher the protection, but the risk of negative health effects goes up, too. Use the lowest concentration that you think will provide the protection you need. Products with 10 – 35 percent DEET will provide adequate protection under most conditions. The American Academy of Pediatrics recommends that repellents used on children contain no more than 10 percent DEET.

DEET has been widely used for many years. Skin reactions (*particularly at concentrations of 50 percent and above*) and eye irritation are the most frequently reported health problems. Some reports of central nervous system problems, more frequently reported in children than adults, range from slurred speech and confusion to seizures and coma.

Unlike DEET, permethrin repellents are for use on clothing only, not on skin. Permethrin kills insects that come in contact with treated clothes. Permethrin repellents can cause eye irritation, particularly if label directions have not been followed. Animal studies indicate that permethrin may have some cancer-causing potential. Permethrin is effective for two weeks or more if the clothing is not washed. Keep treated clothing in a plastic bag when not in use.

If you decide to use any kind of chemical repellent, carefully read and follow all label directions before each use. On the labels, you will find important information about how to apply the repellent, whether it can be applied to skin and/or clothing, special instructions for children, hazards to humans, physical or chemical hazards and first aid.

CONSIDERATIONS

Deciding on whether you want to use a repellent depends on a combination of things, including where you are, how long you will be outside and how bad the bugs are. Every situation is different. Use the following questions to make a “profile” that fits your situation – this might help you decide if you want to use a repellent, and if so, which kind.

- **When will you be outside? Where will you be?**

Some pests are more active at certain times – for example, many mosquitoes are most active between dusk and dawn. In addition, some places are more likely to have higher mosquito numbers.

- **How long will you be outside?**

Are you doing some gardening, going on a hike, camping for a week? The longer you are out, the more protection you need. Some people exposed to high numbers of mosquitoes for long periods of time use a two-part approach. With this approach, about 33 percent DEET in a controlled release formula is applied on exposed skin, and clothing is treated with permethrin. If, on the other hand, you are going to do some yard work or have a picnic during mid-day when mosquito activity is low and you decide to use an insect repellent, even lower concentrations can provide sufficient protection from mosquito bites for a few hours.

- **Are you trying to protect a child?**

Applying insect repellent to children requires special precautions. For example, repellent should never be applied to children's hands because they put their hands in their mouths. The American Academy of Pediatrics recommends that repellents appropriate for use on children from birth to age five should contain no more than 10 percent DEET. In addition, provide a physical barrier on children such as long sleeves and long pants.

- **Do mosquitoes pick you out in a crowd?**

You may consider using a repellent if you get a lot more bites than someone who never seems to get bitten.

Remember: If you decide to use a repellent, use only what and how much you need for your situation.



MISSISSIPPI STATE DEPARTMENT OF HEALTH

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